

What is Claimed is:

1. A composition comprising cross-linked collagen a
glycosaminoglycan, said composition retaining
characteristics to function as a matrix or scaffold
5 following terminal sterilization.

2. The composition of claim 1 further comprising a
silicone layer applied to the collagen and
glycosaminoglycan prior to cross-linking.

3. A terminally sterilized matrix or scaffold
10 comprising the composition of claim 1.

4. A terminally sterilized matrix or scaffold
comprising the composition of claim 2.

5. A method for producing the composition of claim
1 comprising cross-linking the collagen and
15 glycosaminoglycan at a density which stabilizes the
composition toward electron beam radiation while retaining
characteristics of the composition to function as a matrix
or scaffold.

6. The method of claim 5 wherein cross-linking of
20 the composition is performed with glutaraldehyde at a
concentration greater than 0.25%.

7. The method of claim 5 wherein the composition is
subjected to two or more cross-linking steps.

8. The method of claim 7 wherein the two or more
25 cross-linking steps are performed with glutaraldehyde at
0.25%.

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9. A method for producing a terminally sterilized matrix or scaffold comprising:

- (a) producing a composition of claim 1;
- (b) sealing the composition in a package; and
- 5 (c) exposing the composition in the sealed package to electron beam radiation.

10. The method of claim 9 wherein the composition of step (a) is produced by cross-linking the collagen and glycosaminoglycan at a density which stabilizes the
10 composition toward electron beam radiation while retaining characteristics of the composition to function as a matrix or scaffold.

11. A terminally sterilized matrix or scaffold
15 produced in accordance with the method of claim 9.

12. A method for regenerating dermal or sub-dermal tissue in a subject comprising applying to or implanting within the subject the terminally sterilized matrix or scaffold of claim 3 at or near an excision site of dermal
20 or subdermal tissue or a site where augmentation of dermal or subdermal tissue is required.

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